

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1-5 (canceled)

Claim 6 (currently amended): A method for producing a solid electrolytic capacitor comprising a metal material having thereon a dielectric film having surface pores and a solid electrolyte formed on a desired position of the dielectric film, said metal material being cut into a predetermined shape and having valve action, wherein the method comprises the step of coating by press-contacting a masking material solution on said metal material, and linearly around the entire circumference of the metal material to form a first masking layer and the step of coating a masking material solution on said metal material to form a second masking layer, wherein at least the step of forming a second masking layer causes the infiltration of the masking material solution into the pores of the dielectric film and the formation of the masking layer on the infiltrated portion.


Claim 7 (canceled)

Claim 8 (previously amended): The method for producing a solid electrolytic capacitor as claimed in claim 6, wherein a solution of a heat resistant resin or a precursor thereof is used as the masking material solution.

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Claim 9 (original): The method for producing a solid electrolytic capacitor as claimed in claim 8, wherein the solution of a heat resistant resin or a precursor thereof is a low molecular weight polyimide solution or polyamic acid solution capable of being solidified by heating.

Claim 10 (previously amended): The method for producing a solid electrolytic capacitor as claimed in claim 8, wherein the masking material solution further contains silicone oil, silane coupling agent or polyimidesiloxane.

 Claim 11 (previously amended): The method for producing a solid electrolytic capacitor as claimed in claim 6, where the metal material having valve action is a metal material selected from the group consisting of aluminum, tantalum, niobium, titanium, zirconium and an alloy thereof.

Claim 12 (previously amended): The method for producing a solid electrolytic capacitor as claimed in claim 6, where the solid electrolyte is a polymer solid electrolyte containing as a repeating unit at least one of a divalent group of any of pyrrole, thiophene, aniline and furan, or any substituted derivative thereof.

Claim 13 (original): The method for producing a solid electrolytic capacitor as claimed in claim 12, wherein the solid electrolyte contains a polymer of 3,4-ethylenedioxythiophene.

Claim 14 (previously amended): The method for producing a solid electrolytic capacitor as claimed in claim 12, wherein the solid electrolyte further contains a dopant of an arylsulfonic salt.

Claims 15-28 (canceled)

29. (currently amended): ~~[[The]]~~ A method for producing a solid electrolytic capacitor ~~as claimed in claim 6, further,~~ comprising a metal material having thereon a dielectric film having surface pores and a solid electrolyte formed on a desired position of the dielectric film, said metal material being cut into a predetermined shape and having valve action, wherein the method comprises the steps of

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linearly coating ~~said~~ a masking material solution around the entire circumference in ~~the~~ a region undertaking ~~the~~ a boundary in ~~the~~ an application of electrochemical forming onto said metal material, and heating the solution to form said first masking layer;

subjecting an area where a solid electrolyte is formed later to electrochemical forming, the area being defined by the first masking layer on said metal material;

further linearly coating said masking material solution around the entire circumference in the region at a predetermined distance from said first masking layer on said electrochemically formed metal material, and heating the solution to form said second masking layer;

forming a solid electrolyte in the area exclusive of the space between said first masking layer and said second masking layer out of the area subjected to said electrochemical forming; and

cutting said metal material in the space between said first masking layer and said second masking layer,

wherein at least the step of forming a second masking layer causes the infiltration of the masking material solution into the pores of the dielectric film and the formation of the masking layer on the infiltrated portion.

Claim 30 (currently added): The method for producing a solid electrolytic capacitor as claimed in claim 29, wherein a solution of a heat resistant resin or a precursor thereof is used as the masking material solution.

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Claim 31 (currently added): The method for producing a solid electrolytic capacitor as claimed in claim 30, wherein the solution of a heat resistant resin or a precursor thereof is a low molecular weight polyimide solution or polyamic acid solution capable of being solidified by heating.

Claim 32 (currently added): The method for producing a solid electrolytic capacitor as claimed in claim 30, wherein the masking material solution further contains silicone oil, silane coupling agent or polyimidesiloxane.

Claim 33 (currently added): The method for producing a solid electrolytic capacitor as claimed in claim 29, where the metal material having valve action is a metal material selected from the group consisting of aluminum, tantalum, niobium, titanium, zirconium and an alloy thereof.

Claim 34 (currently added): The method for producing a solid electrolytic capacitor as claimed in claim 29, where the solid electrolyte is a polymer solid electrolyte containing as a repeating unit at least one of a divalent group of any of pyrrole, thiophene, aniline and furan, or any substituted derivative thereof.

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EG
Claim 35 (currently added): The method for producing a solid electrolytic capacitor as claimed in claim 34, wherein the solid electrolyte contains a polymer of 3,4-ethylenedioxythiophene.

Claim 36 (currently added): The method for producing a solid electrolytic capacitor as claimed in claim 34, wherein the solid electrolyte further contains a dopant of an arylsulfonic salt.
